

The SKA Observatory: progress towards the next generation of radio astronomy

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The SKA Observatory (SKAO) is coordinating a global effort to build the largest science facility on the planet. This next-generation radio astronomy observatory will transform our understanding of the Universe and deliver benefits to society through global collaboration and innovation. It is also an exa-scale science and computing project that will push the boundaries of computational innovation and engineering capability.

SKAO is one observatory with two telescopes: SKA-Low in Western Australia and SKA-Mid in South Africa, with the global headquarters at Jodrell Bank, UK. SKA-Low will comprise up to 131,072 antennas with a frequency range of 50-350MHz. The antennas will be deployed in clusters along spiral arms spanning 65 km of CSIRO's Murchison Radio-astronomy Observatory. SKA-Mid in South Africa will consist of 197 15m dishes, observing between 350MHz and 15GHz.

In 2021 SKAO was established as an intergovernmental organisation composed of member states from four continents, with organisations from 16 countries in total currently participating in the project. For Australia, this is the first opportunity to host a global mega-science project on behalf of the international community.

After decades of planning, the construction phase of the SKA has started and building will commence on the telescope sites within the next six months. This talk will provide an update on the establishment of the SKA Observatory and progress towards its two telescopes. A particular focus will be on the development of the Observatory in Australia, providing an update on the growing team, highlighting steps towards construction on the telescope site, and discussing relationships with local, national and international partners.

We acknowledge the Wajarri Yamaji people as the traditional owners of the Murchison Radio-astronomy Observatory site, on which the SKA in Australia will be built.